



MEMORANDUM

TO: John Bassett
Arun Raj
Cina Dabestani

VDOT
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VDOT

FROM: Pooja Bhagia
Tushar Awar, P.E.
Christopher Tacinelli, P.E.



DATE: December 4, 2009

SUBJECT: Response to Comments for Temple Baptist Church and School (1st Submission)
Loudoun County Application Numbers ZMAP 2009-0006 and SPEX 2009-0026

This document addresses the comments received for the Temple Baptist Church and School (1st Submission) traffic impact study, Loudoun County Application Numbers ZMAP 2009-0006 and SPEX 2009-0026, in Loudoun County, Virginia. Each comment is presented in *italics* with the response in **bold** immediately following.

COMMENTS (FROM TRAFFIC ENGINEERING: ARUN RAJ)

- 1) *Provide plan at an engineering scale of the existing and proposed site uses.*

A concept plan with the building footprints has been included. The detailed engineered plans will be submitted at the site plan stage.

- 2) *Provide Level of Service (LOS) by lane group as well in both tables and figures.*

Comment acknowledged. Please refer to the revised report dated December 4, 2009.

- 3) *Conduct queuing analysis for left turning movements for intersection # 1, 2, 3 and intersection # 4.*

Comment acknowledged. Please refer to the revised report dated December 4, 2009.

- 4) *Page 19 and Appendix C; Retail land use is considered in the report whereas scoping letter does not have information regarding Retail land use. Also, Church land size is different than mentioned in scoping letter.*

The additional retail component and change in Church size were both modifications, which occurred after the scoping meeting was held. The changes were minimal, which did not warrant the need for a revised scoping meeting. Although, the retail component was a new land use introduced after the scoping meeting, the size of the retail component is relatively minimal in relation to the approved retail use for the site; and therefore generates far less trips. Please refer to Table 5B in the revised report for the trip generation comparison between the proposed and approved development. Figure 11B shows the site distribution percentages and peak hour traffic volumes for the proposed retail development.

- 5) *Appendix C, Scoping letter; There is discrepancy in trip distribution for Waxpool Road W and Faulkner Parkway between page 2 of 8, and page 7 of 8 in the scoping letter. Trip distribution in Table 4 on page 20 of the report is matched with page 7 of 8 of scoping letter (not with page 2 of 8 of the scoping letter). Please verify and correct which trip distribution used is correct.*

Comment acknowledged. The figure on page 7 of 8 in the scoping letter represents the correct distribution. In order to eliminate the confusion, the distribution on page 2 has been eliminated in the revised scoping document and a note has been added to refer to figure 2 on page 7.

- 6) *Appendix A; Provide date and day of data collection for Red Run Drive/Ashburn Village Blvd and Waxpool Road/Ashburn Village Blvd. Also, AM system peak and PM system peak time is shown incorrectly for both intersections.*

Comment acknowledged. The two intersections referenced above were also analyzed for the Sunday peak hour. Traffic counts were conducted on Sunday, May 31, 2009 at these two intersections. The data and system peak for the Sunday peak hour have been updated accordingly.

- 7) *Please reference to proper appendix # when referencing to technical appendix (e.g. Please refer Appendix A, Appendix B etc instead of referring as technical Appendix).*

Comment acknowledged. The proposed appendix #'s have been referenced in the revised report.

- 8) *Page 8, Fig 5; Existing count data does not match with the data provided in Appendix A, Traffic volume and count sheets for intersection # 3 (e.g. Southbound through volume shall be 352 and 388 for AM and PM peak hour). Please verify and correct volume in corresponding Synchro files.*

The traffic counts data collected for the study intersections was reviewed and balanced on the higher side (to be conservative) in order to eliminate any manual data entry errors. Hence, the existing counts at intersection # 3 were balanced and are higher than the raw data shown in Appendix A.

- 9) *Page 8, Fig 5; the orientation of intersection # 5 does not match with the orientation provided in traffic count in Appendix A. Please verify and correct accordingly.*

Comment acknowledged. The traffic count sheet has been revised to reflect the orientation provided in the report figure.

- 10) *Page 7, Fig 4; intersection # 5 southbound approach lane configuration does not match in the corresponding Synchro files provided in Appendix D.*

Comment acknowledged. The Synchro files have been updated to reflect the correct lane configuration. Please refer to the revised report dated December 4, 2009.

- 11) *Appendix E and Appendix F; PHF value of 1 used for intersection # 4 (Waxpool Rd and Ashburn Village Blvd) for future conditions without development and future conditions with development is not acceptable.*

A discussion was held with the VDOT reviewers regarding the use of PHF of 1.0 for the intersection of Waxpool Road and Ashburn Village Boulevard under future conditions. Waxpool Road and Ashburn Village Boulevard are two major regional roads. Since the analysis for future conditions includes two major roads in the area carrying substantial traffic, the PHF will be closer to 1.0. An agreement was reached with the VDOT reviewers on this matter and it was decided to maintain the PHF of 1.0 for this intersection under future conditions.

- 12) There is an email memorandum as an addendum to the traffic impact study. Include description of this email memorandum dated August 25, 2009 in the revised traffic impact study report.*

Loudoun County OTS staff had requested for a brief description of the hazardous locations in the vicinity of the site. Typically, this section is included in the report, however it was not included in the traffic study dated July 29, 2009. Hence, a supplemental memo was submitted subsequently. The memo has been incorporated in the revised report dated December 4, 2009.

- 13) Although a signal is intuitively warranted based on the analysis for projected traffic; however, we recommend that a signal warrant study be re-examined no earlier than one year prior to build out of the project. Signal warrant study needs to be provided in a separate booklet and alternatives other than a traffic signal should be provided in the study. As of July 1, 2009, all warrant studies should be signed and sealed by a professional engineer registered in the Commonwealth of Virginia.*

Comment acknowledged.

COMMENTS (FROM TRANSPORTATION PLANNING: CINA DABESTANI)

- 1) Please clarify as how the "Daily Traffic Volumes" shown on figures 5, 8, and 12 were computed.*

The 'Daily Traffic Volumes' were calculated by applying a k-factor to the PM peak hour volumes. To be consistent with the data available for the study area, a k-factor of 10 was applied to the peak hour volumes. Hence, the peak hour volumes for the roadway links were calculated and then multiplied by the k-factor in order to forecast the 'Daily Traffic Volumes'.